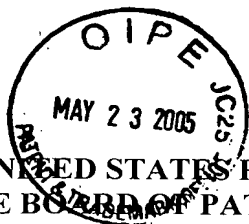


Docket No.: 4590-061



PATENT

AF/10/2005
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of

John D. BEGIN

U.S. Patent Application No. 09/507,955

Filed: February 22, 2000

For: VEHICLE SPEED SENSOR FOR NAVIGATION SYSTEM

:
:
: Confirmation No. 2813
:
: Group Art Unit: 2632
:
: Examiner: PHUNG NGUYEN
:

TRANSMITTAL OF APPEAL BRIEF

Mail Stop Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Submitted herewith is an Appeal Brief in support of the Notice of Appeal filed. A credit card authorization form is attached.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 07-1337 and please credit any excess fees to such deposit account.

Respectfully submitted,

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Date: May 23, 2005

4590-061



**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
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In re Application of	
Inventor(s): John D. BEGIN	Confirmation No. 2813
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Attn: BOARD OF PATENT APPEALS AND INTERFERENCES

APPELLANT'S BRIEF (37 C.F.R. § 1.192)

Mail Stop Appeal Brief - Patents
Commissioner for Patents
U.S. Patents and Trademarks Office

Attn: BOARD OF PATENT APPEALS AND INTERFERENCES

APPELLANT'S BRIEF UNDER 37 C.F.R. § 41.37(c)

This brief is in furtherance of the Notice of Appeal, filed in this case on March 22, 2005.

05/24/2005 JADD01 00000079 09507955

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The fees required under § 41.20 and any required petition for extension of time for filing this brief and fees therefore, are dealt with in the accompanying TRANSMITTAL OF APPEAL BRIEF.

Only one copy of this brief is required under § 41.37.

This brief contains these items under the following headings, and in the order set forth below (*37 C.F.R. § 41.37(c)*):

- I. Real Party in Interest.
- II. Related Appeals and Interferences.
- III. Status of Claims.
- IV. Status of Amendments.
- V. Summary of Claimed Subject Matter.
- VI. Grounds of Rejection to be Reviewed on Appeal.
- VII. Argument.
- VIII. Claims Appendix.

The final page of this brief bears the attorney's signature.

I. REAL PARTY IN INTEREST

The real party in interest in this appeal is Magellan DIS, Inc. of Rochester Hills, Michigan.

II. RELATED APPEALS AND INTERFERENCES

There are no other appeals or interferences that will directly affect, or be directly affected by, or have a bearing on the Board's decision in this appeal.

III. STATUS OF CLAIMS

A. Total Number of Claims in Application

There is a total of 31 claims in the application, which are identified as claims 1-3 and 5-32.

B. Status of all the claims

1. Claims cancelled: claim 4
2. Claims withdrawn from consideration but not cancelled: none
3. Claims pending: claims 1-3 and 5-32
4. Claims allowed: none
5. Claims rejected: claims 1-3 and 5-32

C. Claims on Appeal

Claims on appeal are claims 1-3 and 5-32 as rejected by the Final Office Action dated December 22, 2004.

IV. STATUS OF AMENDMENTS

No amendment was filed in response to the Final Office Action.

V. SUMMARY OF CLAIMED SUBJECT MATTER

Independent claim 1 is directed to a vehicle displacement sensor. *See* the sentence bridging pages 1-2 and FIGs. 2-6 of the instant application. The vehicle displacement sensor comprises a wireless transmitter (46, FIGs. 1-6) and a wireless receiver (44, FIGs. 1 and 3-6). *See* page 4, lines 15-16 of the specification.

The wireless transmitter (46) includes a power source (56 in FIG. 3, 56a in FIG. 4, 56b in FIG. 5, 70 in FIG.6). *See* page 6, lines 1, 6-7, 15-16, and page 7, lines 6-7 of the specification. The wireless transmitter (46) generates a wireless signal (not shown in the figures) indicative of a vehicle displacement. *See* page 4, lines 16-18 of the specification. The wireless transmitter (46) periodically transmits the wireless signal. *See* page 4, line 19 through page 5 line 1 of the specification.

The wireless receiver (48) receives the wireless signal from the transmitter (46). *See* page 4, lines 18-19, page 6, lines 7-10 and 17-20, and page 7, lines 9-13 of the specification.

Independent claim 11 is directed to a vehicle displacement sensor. *See* the sentence bridging pages 1-2 and FIGs. 2-6 of the instant application. The vehicle displacement sensor comprises means for generating (46, FIGs. 1-6) a wireless signal, a wireless receiver (44, FIGs. 1 and 3-6), and means for determining (22, FIG. 1) displacement of a vehicle. *See* page 4, lines 15-16 and page 5, lines 5-10 of the specification.

The means for generating (46) generates the wireless signal (not shown in the figures) indicative of a vehicle displacement. *See* page 4, lines 16-18 of the specification. The means for generating (46) periodically transmits the wireless signal. *See* page 4, line 19 through page 5 line 1 of the specification. The structure described in the specification as corresponding to the means for generating (46) includes a tuning fork (54a, FIG. 4), a resonant LC tank circuit

(54b, FIG. 5), and an RF transmitter (54c, FIG. 6). *See* page 6, lines 7-12 and 17-19, page 7, lines 6-8 and page 8, lines 3-11 of the specification.

The wireless receiver (48) receives the wireless signal. *See* page 4, lines 18-19, page 6, lines 7-10 and 17-20, and page 7, lines 9-13 of the specification.

The means for determining (22) determines displacement of a vehicle based upon the wireless signal. *See* page 5, lines 3-10 of the specification. The structure described in the specification as corresponding to the means for determining (22) includes a CPU (22) which determines the mathematical relationship between revolutions of wheel (48, FIG. 1) received from means for generating (46) and vehicle displacement. The CPU (22) compares the number of wheel revolutions with distances as determined by other sensors of techniques. *See* page 5, lines 3-10 of the specification. The structure described in the specification as corresponding to the means for determining (22) further includes circuitry (72, FIG. 6) which accumulates a number of wheel revolutions and generates a modulated signal to be sent by the means for generating (46). *See* page 7, lines 4-6, 9-11, and 15-20 of the specification. Other structures corresponding to the means for determining (22) are described in page 8, lines 16-18 of the specification.

Independent claim 23 is directed to a navigation system (20, FIG. 1). *See* page 1, lines 8-9 of the specification. The navigation system (20) comprises means for generating (46, FIGs. 1-6) a wireless signal, a receiver (44, FIGs. 1 and 3-6), and means for propagating (22, FIG. 1) a position of the vehicle. *See* page 3, lines 12-13, page 4, lines 6-7, and page 5, lines 11-14 of the specification.

The means for generating (46) includes a power source (56 in FIG. 3, 56a in FIG. 4, 56b in FIG. 5, 70 in FIG. 6). *See* page 6, lines 1, 6-7, 15-16, and page 7, lines 6-7 of the specification. The means for generating (46) generates the wireless signal (not shown in the figures) indicative of rotational displacement of a vehicle part. *See* page 4, lines 16-18 of the specification. The means for generating (46) periodically transmits the wireless signal. *See* page 4, line 19 through page 5 line 1 of the specification. The structure described in the specification as corresponding to the means for generating (46) includes a tuning fork (54a,

FIG. 4), a resonant LC tank circuit (54b, FIG. 5), and an RF transmitter (54c, FIG. 6). *See* page 6, lines 7-12 and 17-19, page 7, lines 6-8 and page 8, lines 3-11 of the specification.

The wireless receiver (48) receives the wireless signal. *See* page 4, lines 18-19, page 6, lines 7-10 and 17-20, and page 7, lines 9-13 of the specification.

The means for propagating (22) propagates a position of the vehicle based upon the wireless signal. *See* page 5, lines 11-14 of the specification. The structure described in the specification as corresponding to the means for propagating (22) includes a CPU (22) which performs the function by dead-reckoning. *See* page 5, lines 11-14 of the specification.

Independent claim 29 is directed to a method (not shown in the figures) for determining vehicle displacement. *See*, e.g., page 4, line 15 through page 5, line 10 of the specification.

The method includes the step of generating (not shown in the figures) a wireless signal which is indicative of rotational displacement of a vehicle part. *See* page 4, lines 16-18 of the specification. The wireless signal is periodically transmitted. *See* page 4, line 19 through page 5 line 1 of the specification.

The method further includes the step of receiving (not shown in the figures) the wireless signal. *See* page 4, lines 18-19, page 6, lines 7-10 and 17-20, and page 7, lines 9-13 of the specification.

The method also includes the step of determining (not shown in the figures) displacement of a vehicle based upon the wireless signal. *See* page 5, lines 3-10 of the specification.

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

A. First Ground of Rejection

The rejection of claims 1-3 and 7-10 under 35 U.S.C. 103(a) as being unpatentable over *Lowe* (U.S. Patent No. 5,673,018) in view of *McLaughlin* (U.S. Patent No. 6,243,007).

B. Second Ground of Rejection

The rejection of claim 5 under 35 U.S.C. 103(a) as being unpatentable over *Lowe* in view of *McLaughlin* and further in view of *Huang* (U.S. Patent No. 6,175,302).

C. Third Ground of Rejection

The rejection of claim 6 under 35 U.S.C. 103(a) as being unpatentable over *Lowe* in view of *McLaughlin* and further in view of *Miller* (U.S. Patent No. 4,694,295).

D. Fourth Ground of Rejection

The rejection of claims 11-12, 15-18 and 21-32 under 35 U.S.C. 103(a) as being unpatentable over *Lowe* in view of *McLaughlin* and further in view of *Davis* (U.S. Patent No. 5,177,685).

E. Fifth Ground of Rejection

The rejection of claim 13 under 35 U.S.C. 103(a) as being unpatentable over *Lowe* in view of *Davis* and *McLaughlin* and further in view of *Huang*.

F. Sixth Ground of Rejection

The rejection of claim 14 under 35 U.S.C. 103(a) as being unpatentable over *Lowe* in view of *Davis* and *McLaughlin* and further in view of *Miller*.

G. Seventh Ground of Rejection

The rejection of claim 19 under 35 U.S.C. 103(a) as being unpatentable over *Lowe* in view of *Davis* and *McLaughlin* and further in view of *Maples* (U.S. Patent No. 4,833,281).

H. Eighth Ground of Rejection

The rejection of claim 20 under *35 U.S.C. 103(a)* as being unpatentable over *Lowe* in view of *Davis* and *McLaughlin* and further in view of *Maples* and *Miller*.

VII. ARGUMENT

A. First Ground of Rejection

35 U.S.C. 103(a) rejection of claims 1-3 and 7-10 as being unpatentable over *Lowe* in view of *McLaughlin*.

An application for patent filed under section 111(a) or section 363 of this title for an invention disclosed in the manner provided by the first paragraph of section 112 of this title in a provisional application filed under section 111(b) of this title, by an inventor or inventors named in the provisional application, shall have the same effect, as to such invention, as though filed on the date of the provisional application filed under section 111(b) of this title, if the application for patent filed under section 111(a) or section 363 of this title is filed not later than 12 months after the date on which the provisional application was filed and if it contains or is amended to contain a specific reference to the provisional application. *35 U.S.C. 119(e)(1)* (emphasis added).

To establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). See also *MPEP*, section 2143.

Appellant respectfully traverses the Examiner's erroneous rejection because the teaching reference of *McLaughlin* is not prior art to the claimed invention. In particular, the

earliest, effective reference date of *McLaughlin* is its 35 U.S.C. 102(e) filing date, i.e., December 1, 1999, which postdates the claimed domestic priority date of the instant application, i.e., February 22, 1999. See the domestic priority claim at page 1, lines 5-6 of the specification. Therefore, Appellant respectfully submits that the *McLaughlin* reference is not prior art and cannot be applied against the claims of the instant application.

Appellant further traverses the Examiner's rejection for the reasons advanced in the July 29, 2004 Request for Reconsideration, at page 2, lines 7-13. In particular, *Lowe* teaches that the transponder receives an interrogation signal in order to transmit the distance that the vehicle has traveled. Although *McLaughlin* teaches periodically sending a signal, the *Lowe* "transmission upon interrogation" disclosure teaches away from *McLaughlin* et al. Thus, the ordinary artisan would not make the Examiner's proposed combination of *Lowe* and *McLaughlin*. In addition, the Examiner has not pointed to any specific suggestion in either of the references for making the proposed combination of *Lowe* and *McLaughlin*. The fact that both references have sensors is irrelevant and is not a suggestion. Accordingly, at least the first criterion has not been met, a prima facie case of obviousness has not been established, and the rejected claims are not unpatentable over the improperly applied references.

Conclusion

For the reasons presented above, Appellant respectfully requests that the 35 U.S.C. 103(a) rejection of claims 1-3 and 7-10 be reversed.

B. Second Ground of Rejection

35 U.S.C. 103(a) rejection of claim 5 as being unpatentable over Lowe in view of McLaughlin and further in view of Huang

Appellant respectfully traverses this erroneous rejection for the reasons advanced with respect to independent claim 1 from which claim 5 depends.

Conclusion

For the reason presented above, Appellant respectfully requests that the 35 U.S.C. 103(a) rejection of claim 5 be reversed.

C. Third Ground of Rejection

35 U.S.C. 103(a) rejection of claim 6 as being unpatentable over Lowe in view of McLaughlin and further in view of Miller

Appellant respectfully traverses this erroneous rejection for the reasons advanced with respect to independent claim 1 from which claim 6 depends.

Conclusion

For the reason presented above, Appellant respectfully requests that the *35 U.S.C. 103(a)* rejection of claim 6 be reversed.

D. Fourth Ground of Rejection

35 U.S.C. 103(a) rejection of claims 11-12, 15-18 and 21-32 as being unpatentable over Lowe in view of McLaughlin and further in view of Davis

Appellant respectfully traverses this erroneous rejection of independent claims 11, 23 and 29 for the reasons advanced with respect to independent claim 1, i.e., (1) *McLaughlin* is not prior art, (2) *Lowe* teaches away from the Examiner's proposed combination with *McLaughlin*, and (3) the Examiner's suggestion or motivation to combine *Lowe* with *McLaughlin* is inadequate.

Claims 12 and 15-18 depend from claim 11, and are considered patentable at least for the reason advanced with respect to claim 11. Claims 24-28 depend from claim 23, and are considered patentable at least for the reason advanced with respect to claim 23. Claims 30-32 depend from claim 29, and are considered patentable at least for the reason advanced with respect to claim 29.

Conclusion

For the reason presented above, Appellant respectfully requests that the *35 U.S.C. 103(a)* rejection of claims 11-12, 15-18 and 21-32 be reversed.

E. Fifth Ground of Rejection

35 U.S.C. 103(a) rejection of claim 13 as being unpatentable over Lowe in view of Davis and McLaughlin and further in view of Huang

Appellant respectfully traverses this erroneous rejection for the reasons advanced with respect to independent claim 11 from which claim 13 depends.

Conclusion

For the reason presented above, Appellant respectfully requests that the *35 U.S.C. 103(a)* rejection of claim 13 be reversed.

F. Sixth Ground of Rejection

35 U.S.C. 103(a) rejection of claim 14 as being unpatentable over Lowe in view of Davis and McLaughlin and further in view of Miller

Appellant respectfully traverses this erroneous rejection for the reasons advanced with respect to independent claim 11 from which claim 14 depends

Conclusion

For the reason presented above, Appellant respectfully requests that the *35 U.S.C. 103(a)* rejection of claim 14 be reversed.

G. Seventh Ground of Rejection

35 U.S.C. 103(a) rejection of claim 19 as being unpatentable over Lowe in view of Davis and McLaughlin and further in view of Maples

Appellant respectfully traverses this erroneous rejection for the reasons advanced with respect to independent claim 11 from which claim 19 depends.

Conclusion

For the reason presented above, Appellant respectfully requests that the 35 U.S.C. 103(a) rejection of claim 19 be reversed.

H. Eighth Ground of Rejection

35 U.S.C. 103(a) rejection of claim 20 as being unpatentable over Lowe in view of Davis and McLaughlin and further in view of Maples and Miller

Appellant respectfully traverses this erroneous rejection for the reasons advanced with respect to independent claim 11 from which claim 20 depends

Conclusion

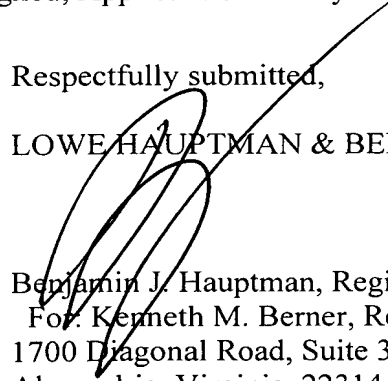
For the reason presented above, Appellant respectfully requests that the 35 U.S.C. 103(a) rejection of claim 20 be reversed.

Each of the Examiner's rejections has been traversed. Accordingly, Applicant respectfully submits that all claims on appeal are considered allowable. Accordingly, reversal of the Examiner's Final Rejection is believed appropriate and courteously solicited.

If for any reason this Appeal Brief is found to be incomplete, or if at any time it appears that a telephone conference with counsel would help advance prosecution, please telephone the undersigned, Applicant's attorney of record.

Respectfully submitted,

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VIII. CLAIMS APPENDIX

1. A vehicle displacement sensor comprising:
a wireless transmitter including a power source generating a wireless signal indicative of a vehicle displacement that periodically transmits said signal; and
a wireless receiver receiving said wireless signal from said transmitter.
2. The vehicle displacement sensor of claim 1 wherein said transmitter is mounted on a rotating component of a vehicle.
3. The vehicle displacement sensor of claim 2 wherein said transmitter is mounted on a wheel.
5. The vehicle displacement sensor of claim 1 wherein said power source generates power based upon motion.
6. The vehicle displacement sensor of claim 2 wherein said transmitter generates an acoustic signal.
7. The vehicle displacement sensor of claim 2 wherein said transmitter generates an RF signal.
8. The vehicle displacement sensor of claim 2 wherein said transmitter generates a fixed number of beacon signals upon each revolution of the vehicle part.
9. The vehicle displacement sensor of claim 8 wherein said fixed number is one.
10. The vehicle displacement sensor of claim 1 wherein said transmitter generates modulated RF signal indicative of vehicle displacement.

11. A vehicle displacement sensor comprising:
means for generating a wireless signal indicative of rotational displacement of a vehicle part which periodically transmits said wireless signal; and
a wireless receiver receiving said wireless signal; and
means for determining displacement of a vehicle based upon said wireless signal.
12. The vehicle displacement sensor of claim 11 wherein said means for generating is mounted on a wheel.
13. The vehicle displacement sensor of claim 12 wherein said means for generating includes a power source generating power based upon rotation.
14. The vehicle displacement sensor of claim 11 wherein said wireless signal is an acoustic signal.
15. The vehicle displacement sensor of claim 11 wherein said wireless signal is an RF signal.
16. The vehicle displacement sensor of claim 11 wherein said means for generating generates a fixed number of beacon signals upon each revolution of the vehicle part.
17. The vehicle displacement sensor of claim 11 wherein said fixed number is one.
18. The vehicle displacement sensor of claim 11 wherein said means for generating generates a modulated RF signal indicative of vehicle displacement.
19. The vehicle displacement sensor of claim 11 further including a mass movable relative to said vehicle part based upon motion, said wireless signal generated based upon motion of said mass.

20. The vehicle displacement sensor of claim 19 wherein said mass is mounted to a piezo-electric device.

21. The vehicle displacement sensor of claim 11 further including means for calibrating said wireless signal to vehicle displacement while the vehicle is moving.

22. The vehicle displacement sensor of claim 11 further including means for dead-reckoning a position of a vehicle based upon said wireless signal.

23. A navigation system comprising:
means for generating a wireless signal including a power source indicative of rotational displacement of a vehicle part which periodically transmits said wireless signal;
a receiver receiving said wireless signal; and
means for propagating a position of the vehicle based upon said wireless signal.

24. The navigation system of claim 23 further including means for calibrating said wireless signal to vehicle displacement while the vehicle is moving.

25. The navigation system of claim 23 further including a database of roads, said position of said vehicle propagated relative to said database of roads.

26. The vehicle displacement sensor of claim 23 further including means for dead-reckoning a position of a vehicle based upon said wireless signal.

27. The vehicle displacement sensor of claim 23 wherein said means for generating a wireless signal counts rotations of a vehicle wheel.

28. The vehicle displacement sensor of claim 27 further including means for calibrating rotations of said vehicle wheel to displacement of the vehicle.

29. A method for determining vehicle displacement including the steps of:
generating a wireless signal indicative of rotational displacement of a vehicle part which periodically transmits said wireless signal;
receiving said wireless signal; and
determining displacement of a vehicle based upon said wireless signal.

30. The method of determining vehicle displacement of claim 29 further including the step of calibrating the wireless signal to vehicle displacement.

31. The method of claim 30 further including the step of dead-reckoning a position of a vehicle based upon the wireless signal.

32. The method of claim 31 wherein the dead-reckoning the position of the vehicle is based upon the calibrated wireless signal.